

MEDION®

43.9 cm / 17.3" Notebook

MEDION® AKOYA® P7815, P7816, E7201, E7221, E7222

Instruction Manual

Table of Contents

1. About these Instructions	5
1.1. Symbols and Key words used in these Instructions	5
1.2. Proper Use	6
1.3. Declaration of Conformity	6
2. Safety Instructions	7
2.1. Dangers for children and people with reduced ability to operate machinery.	7
2.2. Operational Safety	7
2.3. Never Carry Out Repairs Yourself	8
2.4. Data Backup	8
2.5. Setup Location	9
2.6. Environmental Requirements	9
2.7. Ergonomics	10
2.8. Connecting	11
2.9. Cabling	11
2.10. Information about the Touchpad	12
2.11. Battery Mode	12
3. Included with your Notebook	13
4. Views	14
4.1. Open Notebook	14
4.2. Front View	15
4.3. Left Side	15
4.4. Right Side	16
4.5. Operating and Status LEDs	17
4.6. Multimedia Sensortasten (optional)	18
5. First Use	19
6. Power Supply	21
6.1. On/Off Switch	21
6.2. Mains Power	22
6.3. Battery Mode	24
6.4. Power Management (Power Options)	27
7. Display	28
7.1. Opening and Closing the Display	28
7.2. Screen Resolution	28
7.3. Appearance and Customisation	29
7.4. Connecting an External Monitor	30
8. Data Input	31
8.1. The Keyboard	31

9. The Touchpad	33
10.The Hard Drive.....	35
10.1.Important Directories.....	36
11.The Optical Drive.....	37
11.1.Inserting a disc.....	37
11.2.Playing/Reading Discs.....	38
11.3.Regional playback information for DVDs.....	38
11.4.Issues Relevant to the Burner	39
12.The Sound System	40
12.1.External Audio Connections	40
13.Network Operation	41
13.1.What is a Network?	41
13.2.Wireless LAN (Wireless Network)	42
14.Bluetooth (optional)	43
14.1.Flight Mode.....	43
15.The multi-Card Reader.....	44
15.1.Inserting a Memory Card	44
15.2.Removing Memory Cards	44
16.The Webcam	45
17.The Universal Serial Bus Port	45
18.Securing your Notebook	45
18.1.Power-on Password.....	45
18.2.Kensington Security Lock	45
19.Software.....	46
19.1.Getting to know Windows® 8	46
19.2.Windows Activation.....	46
19.3.Windows® 8 – What’s New	47
19.4.Overview.....	49
19.5.Logging in to Windows.....	50
19.6.Linking a User Account to a LiveID.....	51
19.7.Windows® 8 Start Screen.....	52
19.8.Windows® 8 Desktop	53
19.9.Using the Search Function	56
20.Control Panel.....	56
20.1.Windows® 8 Power On/Off Functions	58
20.2.Control Panel Settings.....	58
20.3.Resetting the Notebook to its Factory Settings.....	59
20.4.BIOS Setup Program	60
20.5.Kaspersky Internet Security	60
20.6.Windows® 8 – Help and Support	61

21.FAQ – Frequently Asked Questions..... 62

22.Customer Service 63

 22.1.What To Do In Case of Hardware Problems63

 22.2.Find The Cause63

 22.3.Do You Need More Help?65

 22.4.Driver Support65

 22.5.Transport.....66

 22.6.Maintenance.....67

 22.7.Care of the Display.....67

23.Upgrading/Modifying and Repair 68

 23.1.Notes for Service Technicians68

 23.2.Information on Laser Radiation68

24.Recycling and Disposal..... 69

25.European EN 9241-307 Class II Standard 70

 25.1.FCC Compliance Statement72

Personal Information

Please append the following to your proof of ownership:

Serial number

Date of purchase

Place of purchase

You will find the serial number on the underside of the Notebook. Where applicable, also copy the number on your warranty documents.

Our Target Group

This operating manual is intended to be read by both first-time and experienced users. Regardless of any possible professional use, this Notebook is designed for use in a private household. The entire family will be able to enjoy the wide variety of applications it offers.

The Quality

We select our components with a close eye to functionality, ease of use, safety and reliability. Thanks to our ideally balanced hardware/software concept we are able to offer you a state-of-the-art Notebook that you will enjoy whether you are working or at play. Thank you for purchasing our products. We are delighted to welcome you as our new customer.

Copying this Manual

This document contains legally protected information. All rights reserved. Mechanical, electronic and any other form of reproduction is prohibited without the written permission of the manufacturer.

Copyright © 2012

All rights reserved. This manual is protected by copyright. MEDION® is the owner of the copyright.

Trademarks: MS-DOS® and Windows® 8 are registered trademarks of the Microsoft® corporation. Intel, the Intel Logo, Intel Inside, Intel Core, Notebook, and Core Inside are trademarks of Intel Corporation in the U.S. and/or other countries.

HDMI®, the HDMI logo and the name High-Definition Multimedia Interface are registered trademarks of HDMI Licensing LLC.

Other trademarks are the property of their respective owners.

Subject to technical and optical changes as well as printing errors.

1. About these Instructions



Before using the device for the first time, please read these operating instructions carefully, paying special attention to the safety notices. This device should only be used as designated and as described in these instructions.

Please keep these instructions in a safe place for future reference. Always include these instructions if passing the device on.

1.1. Symbols and Key words used in these Instructions

	<p>DANGER! Warning: immediate mortal danger! Warning! Warning: possible mortal danger and/or serious irreversible injuries!</p>
	<p>CAUTION! <i>Please follow the guidelines to avoid injuries and/or property damage.</i></p> <p>ATTENTION! <i>Please follow the guidelines to avoid property damage.</i></p>
	<p>PLEASE NOTE! <i>Additional information on using the device</i></p>
	<p>PLEASE NOTE! <i>Please follow the guidelines in the operating instructions.</i></p>
	<p>WARNING! Warning: danger of electric shock!</p>
•	Bullet point/information on operating steps and results
►	Tasks to be performed

1.2. Proper Use

This device is designed for the use, management and editing of electronic documents and multimedia content, as well as for digital communication. The device is intended for private use only and not for industrial/commercial use.

Please note that we shall not be liable in cases of improper use:

- Do not modify the device without our consent and do not use any auxiliary equipment which we have not approved or supplied.
- Use only spare parts and accessories which we have supplied or approved.
- Follow all the instructions in these operating instructions, especially the safety information. Any other use is deemed improper and can cause personal injury or damage to the product.
- Do not use the device in extreme environmental conditions.

1.3. Declaration of Conformity

This device is supplied with the following wireless features:

- Wireless LAN (optional)
- Bluetooth (optional)

Due to the output of the integrated wireless LAN solution, the device may only be used inside buildings in France. There are currently no restrictions in any other EU countries. When using the device in other countries, please find out about the relevant legal regulations.

Medion AG hereby declares that this device conforms to the fundamental requirements and the remaining relevant regulations of the 1999/5/EC R&TTE Directive.

This product satisfies the basic requirements and relevant regulations of the Ecodesign Directive 2009/125/EC.

Full declarations of conformity are available at <http://www.medion.com/conformity>.



2. Safety Instructions

2.1. Dangers for children and people with reduced ability to operate machinery.

- This device is not intended for use by people (including children) with reduced physical, sensory or mental abilities or for those without experience and/or knowledge, unless they are supervised by a person responsible for their safety or they have been instructed in its use.
- Children should be supervised to ensure that they do not play with the device. Children should not be allowed to use this device without supervision.
- Keep the device and its accessories out of the reach of children.



DANGER!

Keep plastic packaging out of the reach of children. There is a risk of suffocation.

2.2. Operational Safety

Please read this section carefully and follow all instructions given. The instructions will help you to operate the Notebook reliably and increase its service life.

- Never open the housing of the Notebook, battery or mains adapter! This could result in an electric shock or even ignite a fire which will damage your Notebook.
- Optical drive (CD/CDRW/DVD) constitute class 1 laser equipment providing these devices are contained in a sealed Notebook housing. Do not remove the drive cover as invisible laser radiation may escape.
- Do not insert anything into the Notebook through the slots and openings. This could result in an electric shock or even ignite a fire which will damage your Notebook.
- The slots and openings on the Notebook are for ventilation purposes. Do not cover these openings as this could cause the device to overheat.
- The Notebook is not intended for use by companies in the heavy industry sector.
- To avoid damage from lightning strikes, do not operate the Notebook during thunderstorms.
- Do not place any objects on top of the Notebook and do not exert pressure on the display. Otherwise, there is a risk that the display may break.
- If the screen breaks, there is a danger of injury. If this happens, pick up the shattered pieces wearing protective gloves and send them to your service centre for professional disposal. Finally, wash your hands with soap, as the pieces may have been contaminated with chemicals.

- Do not fold the display back by an angle of more than 120°. Exceeding this value may damage the housing or the Notebook. Always hold the display firmly by the middle when folding it back, adjusting the position and closing it. Failure to do so may damage the display. Never use force to open the display.
- To avoid damaging the screen, do not touch it with fingers or sharp objects.
- Never lift the Notebook up by the display as this could break the hinges.
- Switch the Notebook off immediately/do not switch the Notebook on, disconnect the mains plug and contact customer services if ...
 - the mains adapter or the attached power cable or plug is burnt or damaged. Replace faulty mains cables/mains adaptors only with original parts. These parts should not be repaired under any circumstances.
 - the Notebook housing is damaged or liquid has penetrated into the device. Have the Notebook inspected by customer services. Otherwise, it may not be possible to operate the Notebook safely. There may be a risk of electric shock and/or harmful laser radiation!

2.3. Never Carry Out Repairs Yourself



WARNING!

Never try to open or repair the device yourself. There is a risk of electric shock.

- If there is a fault, contact the Medion Service Center or other suitable specialist workshop.

2.4. Data Backup



ATTENTION!

Back up your data on external storage media before each update. We do not accept any liability for claims for compensation arising from loss of data or any consequential loss or damage.

2.5. Setup Location

- Keep your Notebook and all connected devices away from moisture and avoid dust, heat and direct sunlight. Non-compliance with these instructions can lead to faults or damage to the Notebook.
- Do not use the Notebook outdoors because external elements, such as rain, snow, etc., could damage it.
- Set up and operate all components on a stable, level and vibration-free surface to prevent the Notebook from falling down.
- Do not operate the Notebook or power adaptor for long periods on your lap or any other body part as the heat dissipation on the underside can result in uncomfortable overheating.
- In the first few hours of use new devices can give off a typical, unavoidable but totally harmless smell, which wears off with time. Ventilate the room regularly to prevent odour build-up.

2.6. Environmental Requirements

- The Notebook is most reliably operated at an ambient temperature between
- 5° C (+41° F) and 30° C (+86° F) and at a relative humidity between 20% and 80% (without condensation).
- When powered off, the Notebook can be stored at temperatures between
- 0° C and 60° C (+32° F and 140° F).
- During a thunderstorm, disconnect the mains plug and the antenna plug. For extra safety, we recommend using an overvoltage protection device to prevent the Notebook from sustaining damage as a result of power surges or lightning strikes.
- After transporting the Notebook, wait until the device has reached room temperature before switching it on. Large changes in temperature or fluctuations in humidity can cause moisture build-up within the Notebook due to condensation. This can cause an electrical short circuit.
- Keep the original packaging in the event the device needs to be sent in the post.

2.7. Ergonomics



PLEASE NOTE!

Avoid dazzle, reflections and strong bright-dark contrast in order to protect your eyes.

The Notebook should never be placed next to a window because this is the brightest part of the room in daylight. This brightness can make it more difficult for the eyes to adjust to the darker display. The Notebook should always be positioned so that the direction of vision is parallel to the window front.

Setting up the Notebook with your back to the window is incorrect as reflections from the bright window on the screen will then be unavoidable. A position looking onto the window is also incorrect as the contrast between the dark screen and the bright daylight can cause problems for the eyes to adjust and result in problems. The parallel line of vision should also be maintained in relation to artificial lighting equipment.

In other words, the same criteria and principles apply where the workspace is illuminated with artificial light. Where space restrictions make it impossible to set up the screen as described, then correct positioning (rotating, tilting) of the Notebook/screen can prevent dazzling, reflections and excessive bright-dark contrast, etc. In many cases, an improvement can also be achieved by using slats or vertical blinds on the windows, partition walls or by changing the artificial lighting equipment.

2.8. Connecting

Follow the instructions below to connect your Notebook correctly and safely:

2.8.1. Power Supply



DANGER!

Do not open the housing of the mains adapter. There is a risk of electric shock when the housing is open. It does not contain any parts requiring maintenance.

The socket outlet must be close to the Notebook and easily accessible.

- To disconnect the power supply from your Notebook (via the mains adaptor), pull the mains plug from the power outlet.
- Plug the Notebook's mains adapter into AC 100–240 V~, 50/60 Hz earthed sockets only. If you are not sure about the power supply at the set-up location, please ask your power supplier.
- Use only the mains adapter and power cable supplied.
- For extra safety, we recommend using an overvoltage protection device to prevent your Notebook from sustaining damage as a result of power surges or lightning strikes.
- If you want to disconnect the adapter from the mains, pull the connector out of the wall socket first and then out of the socket on the Notebook. The mains adapter or the Notebook may be damaged if this process is carried out in the reverse order. Always take hold of the plug when disconnecting the cable from the socket. Never pull on the cable.

2.9. Cabling

- Position the cables so that they cannot be stepped on or tripped over.
- To avoid damaging the cables, do not place any objects on them.
- Do not connect peripheral devices – such as keyboards, mouse and monitor, etc. – when the Notebook is switched on to avoid damage to the Notebook or the devices. Some devices may also be connected while the computer is running. This is generally the case for devices with a USB connection. In all cases, observe the relevant operating instructions.
- Maintain a distance of at least one metre from sources of high-frequency and magnetic interference (TV sets, loudspeakers, mobile phones, DECT telephones, etc.) in order to avoid malfunctions and data loss.
- Please note that only shielded cables that are shorter than 3 metres may be connected to the external interfaces of this Notebook. Please only use double-shielded cables for printer cable connections.
- Do not exchange the supplied cable for another one. Use only the supplied cable as this cable has been extensively tested in our laboratory.

- In addition, when connecting your peripherals only use the connecting cables supplied with those devices.
- Ensure that all connection cables are connected to their corresponding peripheral device to avoid any interference radiation. Disconnect any cables that are not required.
- The only devices which may be connected to the Notebook are those that meet the requirements set out in the EN60950 standard "Information Technology Equipment – Safety" or devices that meet the EN60065 standard "Audio, video and similar electronic apparatus – Safety requirements".

2.10. Information about the Touchpad

- The touchpad is operated with the thumb or another finger and reacts to the energy given out by the skin. Do not use pens or other objects as these can damage your touchpad.

2.11. Battery Mode

To extend your battery's performance and lifespan and ensure safe operation, you should observe the guidelines below:

- Never expose the battery to direct sunlight or heat for extended periods.
- Do not throw batteries into a fire.
- Failure to comply with these guidelines can result in damage and possibly even the battery exploding.
- Never open the battery; it does not contain any serviceable parts.
- Avoid dirt and contact with electrically conductive materials or chemical substances and cleaning agents.
- Use only the supplied mains adaptor to charge the battery.

- Make sure (via the Notebook display or acoustic signal) that the battery is fully discharged before charging it again.
- Please note: There is a risk of explosion if batteries are incorrectly replaced. Only replace the battery with the same battery type or an equivalent type recommended by the manufacturer.
- Always charge the battery until the battery charging light goes out. Please also observe the information in “Charging the battery” on page 31 to assess the charge status of your battery.
- Ensure the Notebook is switched off before replacing the battery.
- Batteries are special waste. Dispose of old batteries properly Your customer service agent is the correct point of contact for this.

3. Included with your Notebook

Please check that the contents are complete and notify us within 7 days of purchase if any of the following components are missing:

- Notebook
- Li-Ion Battery
- AC Adapter with Power Cord
- OEM version of operating system
- Instruction Manual

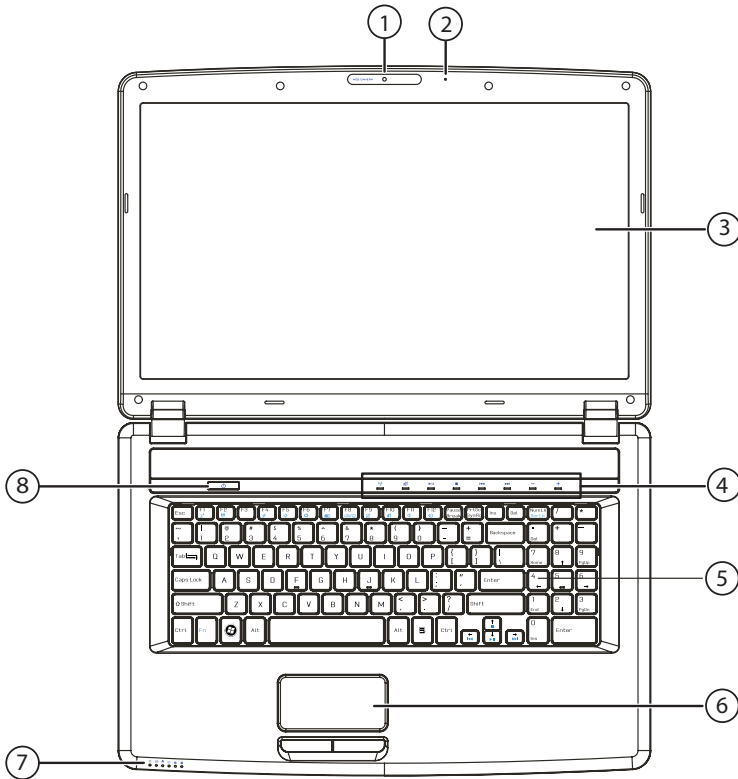


DANGER!

***Keep packaging material such as plastic film away from children.
There is a risk of suffocation if used improperly.***

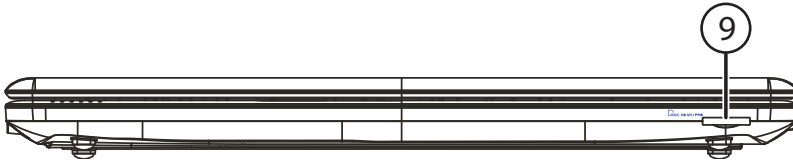
4. Views

4.1. Open Notebook



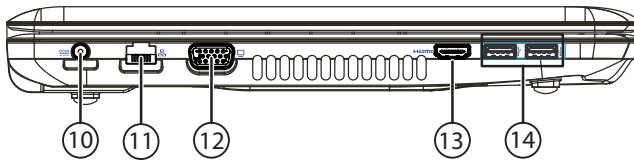
- 1) Webcam
- 2) Microphone
- 3) LCD Display
- 4) Multimedia Sensor Buttons (optional)
- 5) Keyboard
- 6) Touchpad
- 7) Device Indicators
- 8) Power ON/OFF

4.2. Front View



- 9) Multimedia Card Reader

4.3. Left Side



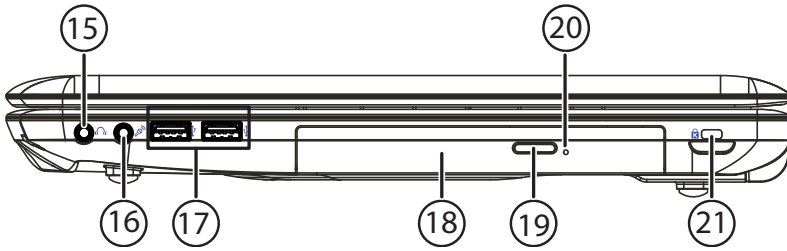
- 10) Power Socket
- 11) LAN Port (RJ-45)
- 12) External monitor port VGA
- 13) HDMI Connector
- 14) USB 3.0 Port



ATTENTION!

The charging function („Symbols and Key words used in these Instructions“ is available in sleep mode and when the Notebook is switched off providing it is activated beforehand in the BIOS.

4.4. Right Side

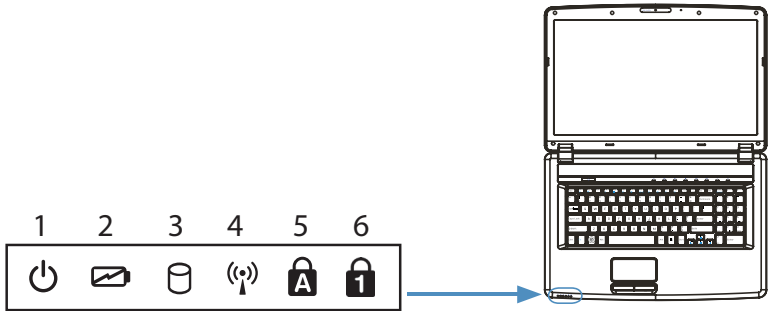


- 15) Audio Out* / Digital Audio Out (S/P-DIF, optical)
- 16) Microphone*
- 17) USB 2.0 Port
- 18) Optical Drive
- 19) Disc Eject Button
- 20) Emergency Ejection
- 21) Kensington® Lock

*Ports with dual function. Configuration is set with the included software

4.5. Operating and Status LEDs

The system displays power supply status and operating modes via LEDs. The operating lights also light up during Notebook activity.











- 1) Operating Indicator
This LED will shine if the system is switched on.
- 2) Battery LED
This LED lights when the battery is charging.
- 3) Access Indicator
This LED lights or flashes when the Notebook is accessing the hard disk or the optical drive.
- 4) WLAN / Bluetooth LED
This LED lights when the WLAN /Bluetooth function is activated.
The following combinations are possible:

Bluetooth on / WLAN on	LED lights
Bluetooth off / WLAN on	
Bluetooth on / WLAN off	
Bluetooth off / WLAN off	LED off

- 5) Capital Lock
This LED lights when CAPS-Lock has been activated. This sets the keyboard to capital letters.
- 6) Num Lock
This LED lights when NUM-Lock has been activated.

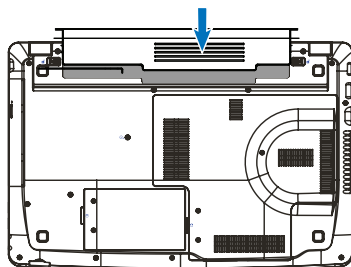
4.6. Multimedia Sensortasten (optional)

	Wireless LAN Enables or disables the wireless LAN function.
	Mute Switches the loudspeakers on / off.
	Pause/Play Button Starts the playback of multimedia files or pauses the playback at the selected point.
	Stopp-Button Stops the playback of multimedia files.
	Previous Track Jumps to the previous title during the reproduction of multimedia files.
	Next Track Jumps to the next title during the reproduction of multimedia files.
	Decreases the volume.
	Increases the volume

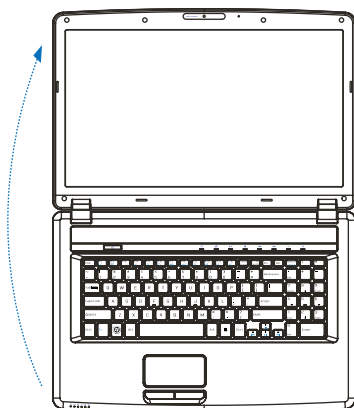
5. First Use

To operate your Notebook safely and ensure a long service life, you should read the “Operational safety” chapter at the beginning of this manual. All operating software is already fully preinstalled on the Notebook so there is no need for you to install any more drivers and you can get started right away.

- ▶ Before starting, insert the battery by placing it into the compartment until it clicks into place. Be sure to fasten the battery compartment to prevent the battery falling out.
- ▶ Connect the supplied mains adapter to the Notebook (**10**). Next, connect the power cable to the adapter and then plug it into a mains socket. Move the switch on the mains adapter (optional) to position **I** to power the Notebook and charge the battery. Set this switch to **0** to stop the power supply.



- ▶ Open up the display to the desired position using your thumb and forefinger. The display should not be folded back by more than 120°. Always hold the display firmly by the middle when folding it back, adjusting the position and closing it. Failure to do so may damage the display. Never use force to open the display.



**PLEASE NOTE!**

When first operating your Notebook please ensure that the battery is inserted and the mains adapter is connected. This is required for Windows® 8 to correctly work out the Windows® 8 performance index.

- ▶ Switch the Notebook on by pressing the on/off switch (9). The Notebook will now start and run through various steps.

**PLEASE NOTE!**

There should be no bootable disk (e.g. the recovery disc) in the optical drive as this will prevent the operating system from being loaded from the hard drive.

The operating system will be loaded from the hard drive. The loading process takes a little longer during the initial setup. Once all the necessary data has been entered, the operating system will be set up. The operating system is fully loaded once the Windows® 8 start-up screen appears.

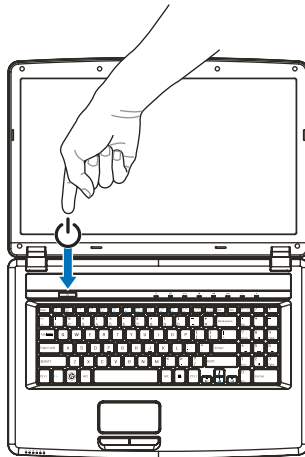
**PLEASE NOTE!**

The initial installation may take a few minutes. Do not unplug the Notebook from the mains or switch it off during the initial installation. This may adversely affect the installation. Do not switch off the Notebook until after the installation has been completed successfully and the startup screen appears.

6. Power Supply

6.1. On/Off Switch

- ▶ Open the Notebook and hold the on/off switch down briefly to switch the Notebook on or off.



The operating light indicates the current operating mode. Regardless of the operating system, the Notebook will switch off if the switch is held down for longer than 4 seconds continuously.



ATTENTION!

Do not switch your Notebook off while the hard drive or optical drive is being accessed. Otherwise data may be lost. To protect the hard drive, you should always wait for 5 seconds after switching off the Notebook before switching it back on again.

6.2. Mains Power

Your Notebook comes with a universal mains adapter for alternating current which automatically adapts to the available power source. The following values are supported: **AC 100–240 V~/50–60 Hz**. Observe the safety information concerning the power supply on pages 12 ff.

The adapter is connected to an AC outlet via a mains cable. The mains adapter DC cable is connected to the **left side** of the Notebook (**10**).

The adapter has an on/off switch (optional). When the switch is set to OFF (**0**), no power is being consumed and no power is being supplied to the Notebook.

The adapter supplies the Notebook with power in the ON position (**I**) and also charges the battery. The operating lights on the Notebook provide information about the operating mode. Your battery will also be charged while you work on your Notebook with the mains adapter connected. The mains adapter also consumes power when the Notebook is not connected to it. You should therefore always remove the mains adapter plug from the socket when it is not connected to the Notebook or move the switch to the OFF (**0**) position.



ATTENTION!

Use only the mains adapter and power cable supplied.

6.2.1. Starting the Notebook

- ▶ Open up the display as described above and press the on/off switch.
- ▶ Follow the instructions on the screen. Step-by-step instructions will guide you through the process to be followed.

The welcome procedure takes you through several screens and dialogues.

- ▶ Select your desired language and then the corresponding country settings.

Licence Agreement

Please read through the licence agreement carefully. It provides important legal information about the use of your software product. To view the text in full, you must slide the scroll bar downwards using the mouse until you reach the end of the document. You accept the licence agreement by checking the **I accept the agreement** radio button. Only this entitles you to use the product in accordance with the terms and conditions.

After entering a computer name you can connect your Notebook to the Internet immediately on the “**Wireless**” page (if you already have an appropriate Internet connection set up).

If you choose to skip this point, you can connect to the Internet later via the Windows® 8 interface.

If you have already set up an Internet connection, you can now log in to your Notebook using a Microsoft account.

The Microsoft Store allows you to purchase new apps or update previously installed apps.

If you log in on a local account, you can set up a Microsoft account later at any time.

The following animated windows simply contain information about using the new Windows® 8 operating system.

No entries of any kind may be made during the animation.

The Windows® 8 interface appears after the login process.



PLEASE NOTE!

In the first few days following the initial installation, Windows® 8 may update and configure data (e.g. with new updates) which can result in delays in the Notebook shutting down and starting up. For this reason, do not switch the Notebook off prematurely. This may adversely affect the installation.

6.3. Battery Mode



PLEASE NOTE!

Please charge and discharge the new battery completely two or three times consecutively to ensure that it reaches its optimum performance! Batteries store electrical energy in their cells and then release it again as required.

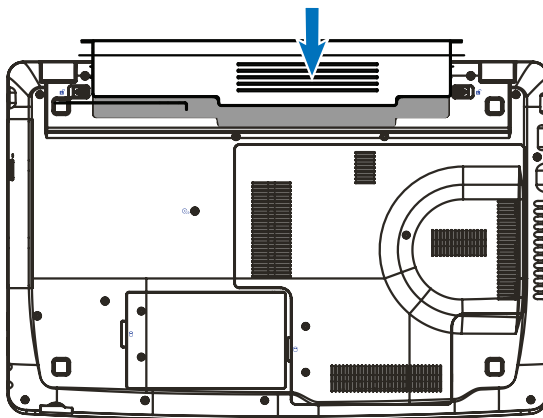
The service life and performance of your battery depends on careful handling.

The battery should always be completely discharged before charging and then fully charged again to optimise the service life and performance.


Please also take note of the safety instructions on „Safety Instructions“.

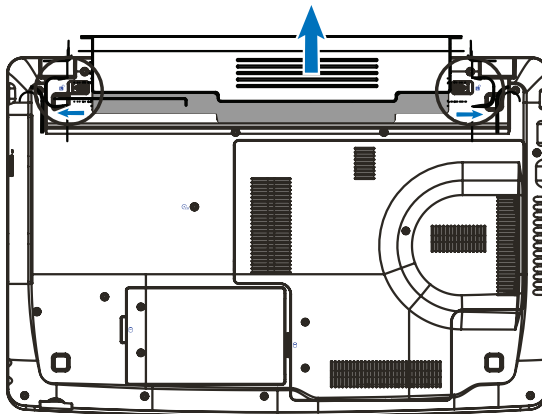
6.3.1. Inserting the Battery

- Insert the battery before bringing the notebook into operation by sliding the battery pack into the compartment. The battery should remain locked in order to avoid it falling out.



6.3.2. Removing the Battery

- ▶ To remove the battery pack, slide the battery lock and to the 'lock open' position  and remove the battery pack from the compartment.



ATTENTION!

Do not remove the battery while the Notebook is switched on or data may be lost.

Take care when storing the battery and when using the Notebook that the contacts on the battery and the Notebook are not soiled or damaged. This could cause malfunctions.

6.3.3. Charging the Battery

The battery is charged using the mains adapter. When the mains adapter is connected and switched on, the battery charges automatically regardless of whether or not the Notebook is switched on or not. A complete charge takes a few hours with the Notebook switched off. With the Notebook switched on, the charging process takes significantly longer.



PLEASE NOTE!

The charging process is interrupted if the battery voltage or temperature gets too high.

6.3.4. Discharging the Battery

Operate the Notebook on battery power until it turns itself off due to low battery charge.



PLEASE NOTE!

Be sure to save your open files promptly to prevent any data loss.

6.3.5. Battery Performance

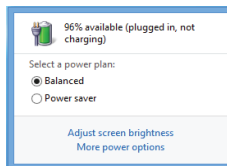
The actual operating time varies depending on the configuration of the power-saving functions. You can configure these to suit your requirements in the **Control Panel** under **System and Security, Power Options**. Note: your Notebook consumes more power when running certain applications, e.g. when playing a DVD.

6.3.6. Checking the Battery Charge

To check the current battery charge status, move the cursor over the power icon in the task bar.

In battery mode, the icon is displayed as a battery.

You can obtain more information about settings by double-clicking the icon.



PLEASE NOTE!

If you ignore the low battery warning, your Notebook will shut down.



ATTENTION!

Never remove the battery while the Notebook is switched on or before the Notebook has shut down completely as this can lead to data loss.

6.4. Power Management (Power Options)

Your Notebook offers automatic and customisable power-saving and energy functions that can be used to optimise battery life and reduce the overall operating costs.

6.4.1. Sleep

With this setting the content of your Notebook's RAM is preserved while practically all other components of your Notebook are disabled or their power consumption reduced to a minimum. For example, if you flip the Notebook shut, it puts it into sleep mode and it is automatically restarted upon opening.



PLEASE NOTE!

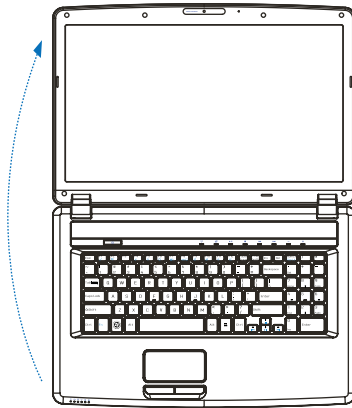
Changes can be made to the sleep settings at any time in the power options.

7. Display

7.1. Opening and Closing the Display

The special design of the display hinges keeps the display closed without the need for an additional catch.

- To open the Notebook, fold the display up to the desired position using your thumb and forefinger.



ATTENTION!

Do not fold the display back by an angle of more than 120°. Always hold the display firmly by the middle when folding it back, adjusting the position and closing it. Failure to do so may damage the display. Never use force to open the display.


Opening and closing the display can be assigned different functions in the power options.

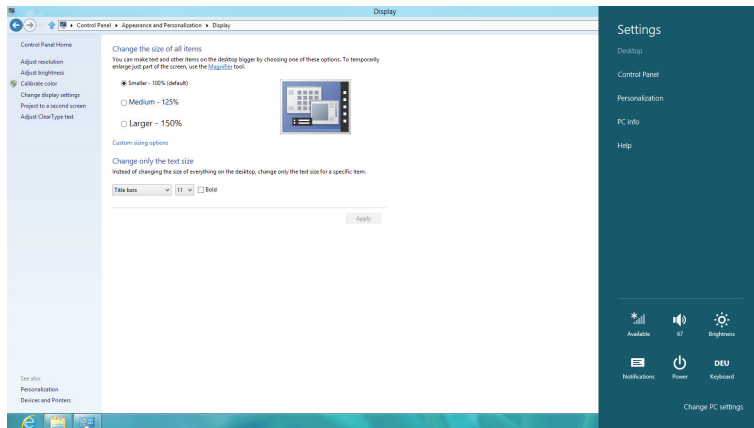
7.2. Screen Resolution

The integrated monitor can display up to **1600 x 900** pixels. If you change to a display with different settings in the Windows® 8 **Control Panel, Appearance and Personalisation** wizard, the display may not, in certain circumstances, fill the entire screen area. Distortions can also occur, especially for fonts, when enlarging. You can work with a higher resolution, however, if you connect an external monitor with a higher resolution. The Windows® 8 **Control Panel, Appearance and Personalisation** wizard allows you to adjust the display to the modes supported.

7.3. Appearance and Customisation

This program gives you the option of customising your desktop. This includes the background image, the screensaver and other settings for your monitor and your graphics card. The program can be started as follows:

- Right-click on the Windows desktop and left-click on **Personalise**.
- **or**
- Via **Settings, Personalisation, Display** by double clicking with the left mouse button.
- ▶ Move the mouse pointer into the top right or bottom corner of the display and click  **Settings**.
- ▶ Then click **Personalisation**.
- ▶ First select the **Display** option from the dialogue box.



The following settings options are available:



- **Set resolution**
- **Set brightness**
- **Calibrate colour**
- **Change display settings**
- **Display on second monitor**
- **Customise ClearType text**

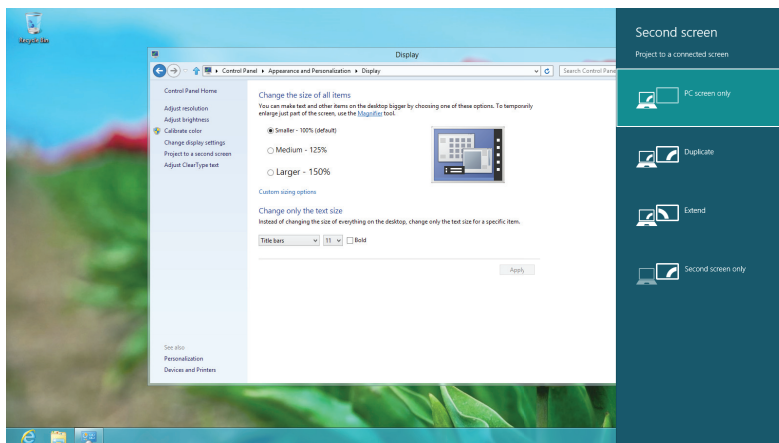
7.4. Connecting an External Monitor

The Notebook has a VGA connection socket (12) as well as an HDMI port (13) for an external monitor.

- ▶ Shut down your Notebook correctly.
- ▶ Plug the external monitor's signal cable into the VGA socket on the Notebook (12). Alternatively, you can use the digital HDMI connection (High Definition Multimedia Interface) (13) to transmit picture and sound signals.
- ▶ Connect the external monitor to the mains and switch it on.
- ▶ Now switch your Notebook on.

Once the operating system has loaded, the external monitor will be detected. A number of options are available. You can access these as follows:

- ▶ Run the **Desktop App**.
- ▶ Move the mouse pointer into the top right or bottom corner of the display and click  **Settings**.
- ▶ Then click **Personalisation**.
- ▶ In the dialogue box, first select the **Display** option and then **Project to a second screen**.
- ▶ Press the  + **P** buttons at the same time to open this menu quicker.



- ▶ Under **Project to a second screen** choose from the following options:
 - **PC screen only**
 - **Duplicate**
 - **Extend**
 - **Second screen only**

7.4.1. Duplicate

This mode duplicates the Notebook display on the external monitor.



PLEASE NOTE!

In this mode the same screen resolution must be configured for both devices.

7.4.2. Extend

In this mode, a blank desktop is displayed on the second (external) monitor. Windows on the first screen can be moved onto the second screen and vice versa.

The screen resolution and colour quality can be configured individually for each of the display devices under **Settings, Personalisation, Display**.

7.4.3. PC Screen Only

The desktop will only be shown on main monitor 1.

7.4.4. Second Screen Only


The desktop will only be shown on the second (external) monitor.

8. Data Input

8.1. The Keyboard

The double assignment of certain keys means that the range of functions available to you is the same as on a conventional Windows keyboard. Some functions are entered using the **FN** key (standard on most Notebooks).

8.1.1. Notebook-Specific Keyboard Shortcuts

	Description
Fn + F1	Sleep To configure these keys to suit your requirements, please go to Power Options
Fn + 	Flight mode Opens the user interface for switching the WLAN and/or Bluetooth function on or off.
Fn + F4	Smart Power You will be able to select between two different Energy Saving Modes with this key combination.
Fn + F5	Darker Reduces the brightness of the display.
Fn + F6	Brighter Increases the brightness of the display.
Fn + F7	Background lighting Turns off background lighting for the integrated display to save power. The lighting is turned back on by pressing any key.
Fn + F8	Display Switches the screen display between LCD, external display and duplicate display.
Fn + F9	Touchpad Switches the touchpad on and off.
Fn + F10	Mute Switches the sound on or off.
Fn + F11	Quieter Decreases the playback volume.
Fn + F12	Louder Increases the playback volume.
Fn + Sc Lk	Scroll This key combination activates / deactivates the scroll function. Many applications use this function to scroll the screen without moving the cursor

9. The Touchpad

In normal mode, the cursor follows the direction specified by moving your fingers in the corresponding direction on the touchpad.



ATTENTION!

Do not use pens or other objects as this can damage your touchpad.

The left and right mouse buttons are found in the lower section of the touchpad and can be used in the same way as those on a conventional mouse.



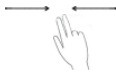

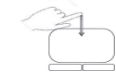


You can also perform a click or a double-click on the touchpad directly by tapping the touchpad surface once or twice briefly.

In the Windows®8 control panel, under the **Mouse** item, you will find a number of useful settings to simplify your day-to-day tasks.

9.1.1. Two-Finger Touchpad Operation

Your touchpad supports two-finger operation which enables certain commands to be executed in some applications.

You can perform the following commands using your touchpad:

Image	Command	Function
	Drag two fingers together or apart	zoom out from an object/ zoom in on an object
	Place one finger in the centre and trace a circle with the second finger	Rotate an object anti-clockwise
	Swipe from left to right/ from right to left with two fingers simultaneously	Page forward/ page back
	Swipe down or up with two fingers simultaneously	Scroll function This function is used in most applications to scroll up and down the screen without having to move the cursor.
	Swipe from top to bottom on the touchpad	Opens the context menu on the start screen and the top and bottom tabs in Internet Explorer
	Swipe from the far right across the touchpad	Opens the menu bar
	Swipe from the far left across the touchpad	Scrolls through all open windows

10. The Hard Drive

The hard drive is your main memory medium and combines high storage capacity with rapid data access. Your Notebook is supplied with an OEM version** of the Microsoft Windows® 8 operating system which supports all of the Notebook's performance features. We have configured your Notebook's hard drive so that you will be able to work with it optimally without having to install any additional drivers yourself. The Windows® 8 operating system requires part of the capacity to manage the hard drive therefore the hard drive's full capacity is not available. This explains any differences between the BIOS display and the operating system display. The Notebook's operating system, other applications and security data are located on the hard drive meaning that the full capacity is already reduced.

The first partition (C:\) contains the operating system, the applications and the "Documents" folder for the configured user.

The second partition (D:\) is used for the data backup and also contains drivers (**D:\Drivers**) and utilities (**D:\Tools**) for your Notebook.



ATTENTION!

The startup files for system restoration „Resetting the Notebook to its Factory Settings“) and the Windows® 8 installation files are located in non-rewritable partitions. These partitions cannot be deleted.

**Original equipment manufacturer/program versions purchased from the manufacturer which are usually sold in conjunction with end devices

10.1. Important Directories

We have listed the most important directories below and described their contents.



ATTENTION!

Do not delete or modify these directories or their content otherwise data may be lost or system functionality may be impaired.

C:

The C: drive root directory contains important files required for Windows® 8 startup. On delivery these files are hidden for security reasons.

C:\Programs

As the name suggests, software programs install the files required for running the application into this directory.

C:\Windows

The main Windows® 8 directory. The operating system saves its files here.

D:\Drivers

You will find all the (preinstalled) drivers required for your Notebook in this folder.

D:\Tools

Here you will find the utility programs for your Notebook.

11. The Optical Drive

11.1. Inserting a disc

Unlike optical drives on a desktop PC, the Notebook uses a mount to hold the disc. When inserting the disc ensure that it is pressed **into the mount correctly** and that it **clicks into position** there.



PLEASE NOTE!

Do not stick protective film or other adhesive labels to the disc. To prevent damage to your drive, do not use any deformed or damaged discs.



ATTENTION!

Do not use scratched, broken, dirty or poor quality discs. The high speeds in the drive can cause these to break destroying your data and damaging your device. Inspect discs carefully before inserting them. If damage or dirt is visible, do not use the disc. Damage caused by faulty media is not covered under warranty and repairs will be chargeable.

Incorrectly positioning the disc in the mount can cause it to be damaged when closing the drive drawer.

- ▶ With the device switched on, press the eject button on the optical drive to open the drawer.
- ▶ Carefully pull the drawer out fully.
- ▶ Remove the disc from its case, where possible without touching the unprinted side.
- ▶ Insert the disc into the drawer with the label up and carefully press it down. The disc now lies flat in the drawer and audibly clicks onto the disc mount.
- ▶ Check that the disc can turn freely and then carefully slide the drawer back into the optical drive until it clicks into place.

On delivery, your optical drive is assigned the drive letter **"E"**. You can easily access the data on your discs using Windows Explorer (**Computer**). Run Windows Explorer using the shortcut on the taskbar or by simultaneously pressing the Windows key and the **"E"** key. When accessing DVD videos (or audio and video files on conventional data CDs), the preinstalled media player is used automatically.

- ▶ If you wish to remove a disc, press the eject button.



ATTENTION!

Do not try to remove the disc from the drive while the Notebook is accessing the optical drive.

11.1.1. Emergency Release of a Blocked Disc

In the event of the drawer no longer opening automatically, it can be opened manually providing your device has an emergency eject hole.

- ▶ Exit Windows® 8 and switch off the Notebook.
- ▶ Insert a long pointed object (e.g. straightened paperclip) into the emergency release until you feel some resistance.
- ▶ A slight push now opens the drawer.
- ▶ Remove the disc and restart the Notebook.

11.2. Playing/Reading Discs

Your optical drive is capable of playing audio CDs, DVD films or data CDs/DVDs.

Once a disc has been loaded, a dialogue box opens containing various playback options. Normally, there will be a number of different options available.

If the dialogue box does not open, there is always the option of accessing the optical drive via **Explorer**.

11.3. Regional playback information for DVDs

Playback of DVD film titles includes decoding MPEG2 video, digital AC3 audio data and decoding CSS-protected content. CSS (sometimes also referred to as Copy Guard) is the name of a data protection program used by the film industry to protect against illegal copying.

Among the many controls for CSS licensees, the most important of the playback restrictions involve country-specific content.

To make it easier to create geographically separate film releases, DVD titles are coded for specific regions. Copyright laws required that each DVD film be limited to a specific region (usually the region where it is sold).

DVD film versions can be published in multiple regions but CSS rules require that each CSS decoder system may only be used for one region.



PLEASE NOTE!

The region setting can be changed up to five times via the viewing software before the last setting becomes permanent. If you then wish to change the region setting again, this must be carried out by the manufacturer. Any shipping and configuration costs must be borne by the user.

11.4. Issues Relevant to the Burner

This section only concerns devices supplied with a CD-RW, a combination CD/DVD read drive or a DVD-RW drive. First some information about **blank discs**

11.4.1. Blank CDs and DVDs

Normal CDs are pressed by a glass master and then sealed. With blank discs, digital information is burned onto them using the drive's laser. They are therefore more sensitive than conventional discs.

Because of this, it is essential to avoid, particularly in the case of unused blanks:

- exposure to direct sunlight (UVA/UVB radiation)
- scratches and damage
- extreme temperatures

12. The Sound System

The **Fn + 11** and **Fn + 12** keyboard shortcut enables you to adjust the volume.

12.1. External Audio Connections

Your Notebook has an integrated stereo speaker so you can always reproduce sound without additional devices. Using the external connections provides you with an ideal opportunity to connect your Notebook to external devices.



WARNING!

Excessive volume when using headphones or earphones can damage your hearing. Before pressing play, set the volume to the lowest setting. Start playback and increase the volume to a comfortable level. Changing the basic settings of the equaliser can also increase the volume and thus cause permanent damage to your hearing. Changing the drivers, software, equaliser, operating system, etc., can also lead to an increase in the volume and thus cause permanent damage to your hearing.

Listening to a device at high volumes for an extended period via headphones/earphones can damage your hearing.

Audio output/ digital audio output (S/PDIF) (16)	For sound output using an external surround sound decoder via an optical cable (available separately from specialist retailers). For sound playback via external stereo devices such as (active) speakers or headphones.
Microphone socket (17)	For recording via an external microphone.

13. Network Operation

13.1. What is a Network?

We talk about a network when multiple computers are directly connected to one another. This allows users to transfer information and data with one another and to share their resources (printers and drives).

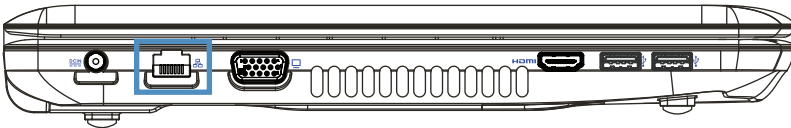
Here are a few concrete examples:

- In an office, messages are exchanged by e-mail and appointments are managed centrally.
- Users share one printer on the network and back up their data to a central computer (server).
- Two or more computers are connected to one another to play network games or exchange data.

13.1.1. Network Connection (RJ45)

Your Notebook comes with a GBit LAN connection.

Connect one end of a cable with a RJ45 connection (western jack) to your Notebook's network interface and the other to a different computer or hub/switch.




You can find more details about the network in the Windows® 8 help.

13.2. Wireless LAN (Wireless Network)

Wireless LAN is an optional feature. This function enables you to establish a network connection to a corresponding remote station. Please read about the necessary requirements.

The wireless LAN function is enabled and disabled via the Windows® 8 menu and is activated by default.

- ▶ Press the **Fn + ** keyboard shortcut to open the menu.



ATTENTION!

Do not operate the WLAN function in locations (e.g.: hospitals, aeroplanes, etc.) where there is sensitive equipment. Do not switch the device unless you are sure it will cause no interference.

13.2.1. Requirements

A so-called WLAN access point may be used as a remote station. A WLAN access point is a radio transmitting device that communicates with your Notebook and controls access to the connected network.

WLAN access points are frequently found in large offices, airports, train stations, universities or Internet cafés. They provide access to particular services and networks or to the Internet.

Access permissions are generally necessary and often result in usage charges. Access points often have built-in DSL modems. These so-called routers establish the connection to the existing DSL Internet connection and the wireless LAN.

A connection can also be established to another end device with wireless LAN functionality without an access point. Without a router, however, the network is restricted to those devices directly connected to it.

The wireless network connection works in accordance with the IEEE 802.11n* standard and is compatible with the IEEE 802.11b/g standard.

If encryption is used for the transfer, the same procedure must be used for all devices. Encryption is a procedure to protect the network from unauthorised access.

The transfer speed can vary depending on the distance and the number of users accessing the remote station.

* To make use of the full performance, a WLAN router compatible with the 802.11n standard is required.

14. Bluetooth (optional)

Bluetooth technology is used to wirelessly bridge short distances. Bluetooth devices transfer data via radio so that computers, mobile phones, printers, keyboards, mice and other devices can communicate with one another wirelessly. Bluetooth wireless technology has numerous possible applications. A few of them are listed below:

- Creating a wireless Internet connection using a mobile phone.
- Transferring files between computers or between a computer and another device.
- Printing using a Bluetooth printer.
- Using a Bluetooth keyboard and mouse.
- Connecting to a PAN (Personal Area Network).
- Synchronising a personal digital assistant (PDA) with a computer or other device that uses Bluetooth.

The Bluetooth wireless technology data transfer speed can vary depending on the device or environmental factors. Data can be transferred through walls, jacket pockets and briefcases using a Bluetooth device. The transfer between Bluetooth devices occurs at the high frequency of 2.4 Gigahertz (GHz). For Bluetooth high speed data transfer, WLAN must be enabled and the partner station must also support the high speed mode.

- Press the **Fn** +  keyboard shortcut to open the menu.





ATTENTION!

Do not operate the Bluetooth function in locations (e.g.: hospitals, aeroplanes, etc.) where there is sensitive equipment. Do not switch the device unless you are sure it will cause no interference.

14.1. Flight Mode

In flight mode, all wireless connections (e.g. WLAN, Bluetooth) are disabled. Flight mode is disabled by default to ensure that all wireless connections are available.

- Move the mouse pointer into the top right or bottom corner of the display and click  **Settings**.
- Next, click **Change PC settings**.
- Click **Wireless**.

Now enable or disable **Flight mode** here. Alternatively, use the **Fn** +  keyboard shortcut to open flight mode.

Once flight mode is enabled, a small aeroplane is displayed in the traditional desktop task bar. You can also enable/disable flight mode by clicking this icon.

15. The multi-Card Reader

Memory cards are media that are used, e.g. in the field of digital photography, and are gradually replacing the diskette. The shape and capacity of a memory card can vary depending on the manufacturer.

Your Notebook supports the following formats:

- MMC (MultiMediaCard)
- SD (Secure Digital), SDHC, SDXC

When inserting the memory cards, ensure that the contacts are pointing in the right direction, as specified in the list below. Inserting a card incorrectly may damage the card reader and/or the card.

Card type	Connection contacts
SD (Secure Digital)	pointing downwards
MMC (MultiMediaCard)	pointing downwards

15.1. Inserting a Memory Card



PLEASE NOTE!

The memory cards can only be inserted in one direction. Please observe the instructions in the section above.

- ▶ Slide the card in as far as it will go.

15.2. Removing Memory Cards

- ▶ To remove SD/MMC cards or memory sticks, first push these into the socket to release the safety catch.
- ▶ Now pull the card out of the slot and store it properly.

16. The Webcam

The integrated webcam enables the use of various communication services.

17. The Universal Serial Bus Port

The universal serial bus (USB 1.1 and USB 2.0) is a standard for connecting input devices, scanners and other peripherals. Up to 127 devices can be connected to the USB ports via a single cable.

The USB 3.0 ports are fully backwards compatible with USB 2.0 and 1.1.

Your Notebook has **2 USB 3.0 connection sockets (14)** and **2 USB 2.0 connection sockets (17)**.



PLEASE NOTE!

Where possible, always connect your USB devices to the same port that they were originally installed on. Otherwise they will be assigned a new ID and the drivers will need to be reinstalled.

18. Securing your Notebook

Your new Notebook has software and hardware solutions for preventing unauthorised access.

18.1. Power-on Password

You can protect your Notebook against unauthorised use with a power-on password. On switching on the Notebook, a password prompt will appear on the screen. The password is set up in the **BIOS**.



ATTENTION!

Keep your password in a safe place. If you forget your password, you have no way of deleting it. If this happens, contact your service centre.

You can also use the Windows® 8 security options to protect your data against unauthorised access.

18.2. Kensington Security Lock

you can use a so-called **Kensington security lock** to protect your Notebook against theft. This security lock (complete with cable) is usually available as an accessory in specialist retailers.

To attach the security lock, wind the cable around a stationery object, e.g. a table leg. Plug the lock into the Kensington device and turn the key to lock it.

Keep the key in a safe place.

19. Software

This section deals with the subject of software. We distinguish here between the **operating system**, the **software** (the applications), the **Windows activation** and the **BIOS**.

19.1. Getting to know Windows® 8


Windows® 8, the new operating system from Microsoft, contains a series of innovative functions and new technologies that your Notebook uses to work quickly and reliably. At the same time, it is also designed to be easy to use.

19.2. Windows Activation

To protect against software piracy, Microsoft has introduced product activation. The Windows® 8 version installed on your Notebook and supplied with the Notebook must be activated to enable you to use of all Windows® 8 functions.

To do this, you require simply an Internet connection. The activation process is fully automatic; no personal data will be transmitted.

If no Internet connection is available, select telephone activation as follows:

- ▶ Move the mouse pointer into the top right or bottom corner of the display and click  **Settings**.
- ▶ Next, click **Change PC settings**.
- ▶ Select the **Activate Windows** item.
- ▶ Now click **activate by phone**.
- ▶ Click **Next** after choosing your country.
- ▶ Call one of the specified hotlines on the telephone and read out the column of figures displayed when prompted to do so.
- ▶ You will then be given a confirmation ID over the telephone. Enter this in the empty field and click **Activate**.



PLEASE NOTE!

If you have not activated Windows® 8, not all functions will be available to you under PC settings. A watermark will also continue to be displayed at the bottom right on the traditional desktop.

19.3. Windows® 8 – What's New

Microsoft Account


A Microsoft account is an e-mail address and password for logging in to Windows® 8. You can use any e-mail address. We recommend using the address you use to communicate with friends and log into your favourite web sites, however.

The Microsoft account also allows you to purchase or download apps from the Store and install them on up to five devices.

Once you have logged on to your Notebook using a Microsoft account, you also have access to the various services and programs provided by Microsoft.

- The contact information and status updates for your friends from services such as Hotmail, Facebook, Twitter and LinkedIn will be updated automatically as soon as you run these services using your Microsoft account.
- You can also access and share your photos, documents and other files via SkyDrive, Facebook and Flickr.
- Your personal settings, including designs, language settings, Internet favourites and apps will be synchronised with each PC running Windows® 8 that you log on to.
- You can obtain Apps from the Windows® 8 Store. You can use these on any PC running Windows® 8 that you log on to.

If you wish to create a Microsoft account in Windows® 8, proceed as follows:

- ▶ Move the mouse pointer into the top right or bottom corner of the screen and click  **Settings**.
- ▶ Click **Change PC settings**. > **Users** > **Switch to a Microsoft account**.

Taskbar (Desktop Mode)

You can start programs from the taskbar at the bottom of the screen and switch between programs already running. In Windows® 8 you can place any program onto the taskbar, so that you can always open it with a single click. You can also rearrange the icons on the taskbar by simply clicking on them and dragging them to the desired position. Move the mouse pointer over the icons and thumbnails of each file or each open window and that program will be displayed. If you move the mouse pointer over the thumbnail, a full screen preview of the window in question appears. When you move the mouse pointer away from the thumbnail again, the full screen preview closes.

Jump Lists

Jump lists offer a practical way of calling up recently opened files. To display the recently used files, simply right-click on the application icon in the taskbar. Thus if you right-click on the Word icon, the recently used Word documents are displayed. You can also easily place other files you wish to have easily to hand in the jump list so that they are always displayed. This allows you to access documents that you use frequently in just a few mouse clicks.

The jump lists for certain programs such as Windows® 8 Media Player can be populated in advance with frequently used commands. Thus, for example, you will see options to play all music or to reopen the last playlist in the jump list for Windows® 8 Media Player.

The frequently visited and last visited websites are displayed in the jump list for Internet Explorer. This therefore allows you to quickly access commands for certain programs that could previously only be called up from the program itself, such as the command to compose a new e-mail message.

Improved Desktop

Windows® 8 simplifies working with windows on the desktop. You therefore have more intuitive options for opening and closing, changing sizes and rearranging. Windows® 8 makes completing everyday tasks even simpler. The locking function (snaps) makes it easier to compare two open windows, for example. You do not need to manually adjust the size of the opened windows to make a comparison. Simply drag the window to one of the screen margins using the mouse and it will fill half of the screen.

Click the window's title bar, "shake" it and all other opened windows are displayed as icons on the task bar. "Shake" the window once more and the other windows are displayed again.

Improved Device Management

Windows® 8 allows you to connect, manage and use all devices via the central “Devices” function.

All devices are shown in a central location.

With the new “Device Stage” technology, however, Windows® 8 goes one step further with device management. Device Stage helps you to use all compatible devices that are connected to the computer. Thanks to Device Stage you can now display the device status and perform frequently used commands within a single window. Here you will even find images of the devices so you can easily see which devices are connected. The device manufacturers can even adjust Device Stage. For example, if your camera manufacturer releases an updated version of Device Stage, you can see details such as the number of photos on the camera and get links to useful information when you connect the camera to your Notebook.

HomeGroup

With home network groups, a Windows® 8 function, connecting home computers becomes child’s play. A home network group is set up automatically when you connect the first PC running Windows® 8 to the home network. Adding additional PC’s running Windows® 8 to the home network group can be done very quickly. You can specify precisely what should be shared on each PC with all other PCs in the home network group. Sharing files on the various home PCs – and on many other devices – is then as easy as if all the data were located on a single hard drive. Thus, you can save digital photos on the computer in the study and then access them easily on a Notebook in any other room. Similarly, the printer in the study is automatically shared among all PCs in the house once they are part of the home network group.


19.4. Overview

The greatest innovation with Windows® 8 is the Start screen.

This key element replaces the Start menu in Windows® 8.

Here you can run all the main programs and services.

As with previous versions, operation is by inputting commands using the mouse or keyboard.


The Start screen can be opened at any time using the  (**Win**) key. This key also allows you to switch back and forth between the Start screen and an active application. To switch to an application other than the last one opened, press the **Win+Tab** keyboard shortcut.

A central feature of the Start screen are the tiles which each represent an application or function. They are shown in blocks and you can define the number of blocks and their columns yourself.

Drag & drop the tiles to the desired position using the mouse.


19.5. Logging in to Windows

To be able to work with Windows® 8, you must set up a Windows® 8 user account.


- ▶ Move the mouse pointer into the top right or bottom corner of the display, move the mouse down and click  **Settings**.
- ▶ Next, select **Change PC settings**.
- ▶ Open the **User** category.
- ▶ Select **Add a user**, to set up additional user accounts.

Windows® 8 allows you to log in using 3 different login procedures. Windows® 8 gives you the choice of standard login by **password**, a **PIN** or an **image code**. To set up a **PIN** or **image code**, you must first have set up a password for Windows® 8.


19.5.1. Setting up a Password for Windows

- ▶ Move the mouse pointer into the top right or bottom corner of the display and click  **Settings**.
- ▶ Next, click **Change PC settings**.
- ▶ Select the **User** item.
- ▶ Click **Change your Password** and follow the instructions.

19.5.2. Setting a PIN for Windows

- ▶ Move the mouse pointer into the top right or bottom corner of the display and click  **Settings**.
- ▶ Next, click **Change PC settings**.
- ▶ Select the **User** item.
- ▶ Click **Create a PIN** and follow the instructions.

19.5.3. Setting Up an ImageCode for Windows

- ▶ Move the mouse pointer into the top right or bottom corner of the display and click  **Settings**.
- ▶ Next, click **Change PC settings**.
- ▶ Select the **User** item.
- ▶ Click **Create a Picture password** and follow the instructions.



PLEASE NOTE!

The image code login has been specially designed for touch screen devices.

In devices without a touch screen, use the mouse instead of finger movements or gestures.




PLEASE NOTE!

To be able to use all Microsoft services you need to log in using a Microsoft account.

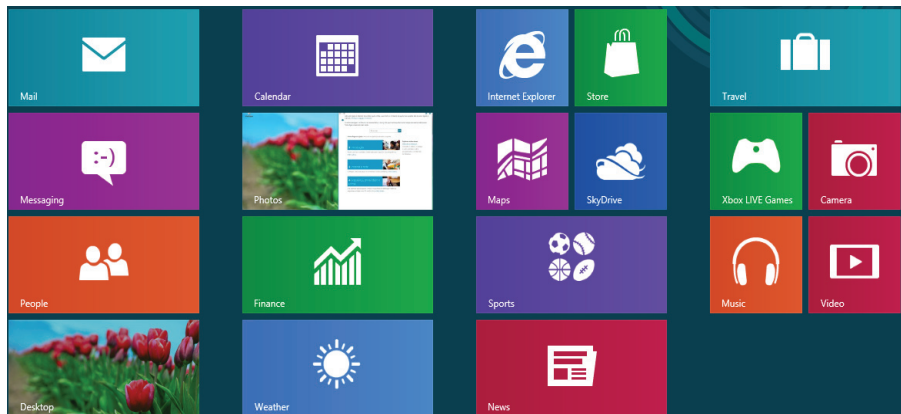
19.6. Linking a User Account to a LiveID

You can link your user account to a LiveID. This enables you to log in to any computer or mobile device connected to the Internet using your LiveID.

- ▶ Move the mouse pointer into the top right or bottom corner of the display, move the mouse down and click  **Settings**.
- ▶ Next, select **Change PC settings**.
- ▶ Open the **User** category.
- ▶ Select **Switch to a Microsoft account**.
- ▶ Now enter your Windows Live ID e-mail address.
If you have not yet created a Windows Live ID account or added an e-mail address to your Windows Live ID account, you can create and edit your Windows Live ID account at **<http://www.windowslive.com/>**.
- ▶ Follow the instructions on the screen to complete the link.

19.7. Windows® 8 Start Screen

Once the operating system is running, you will see the new Windows® 8 Start screen.



(image similar)

Information such as the following may be displayed here, for example:

Windows® 8 App		Windows® 8 apps are executable programs.
		The “Desktop” tile opens the traditional Windows display.
		The Internet Explorer tile launches Internet Explorer



PLEASE NOTE!

Apps are applications that are displayed on a desktop with a program thumbnail. The app thumbnails are bigger than the standard tiles.



19.8. Windows® 8 Desktop

This image shows a symbolic representation of additional programs.





(image similar)


Information such as the following may be displayed here, for example:


Classic desktop apps		Desktop apps are applications that are displayed on a desktop with a program thumbnail. The app thumbnails are bigger than the standard tiles.
		The classic “Power Recover” desktop app launches the system recovery program.
		The classic “Microsoft Office” desktop app launches the Microsoft Office program.

Windows® 8 apps from third-party suppliers are displayed as follows.
Example:

Windows® 8 apps from third-party suppliers		These Windows® 8 apps are executable programs from third-party suppliers.
		This Windows® 8 app launches the “PowerDVD” program.
		This Windows® 8 app launches the “YouCam” program.

19.8.1. Working with Windows® 8 and Cassic Apps

Menu	Instructions
Opening an app	<ul style="list-style-type: none">▶ Click the desired app with the left mouse button.
Closing an app	<div> PLEASE NOTE! <i>Not all apps need to be closed! Windows® 8 closes unused apps automatically.</i></div> <ul style="list-style-type: none">▶ Press the Alt+F4 keyboard shortcut.▶ Click on the top edge of the running app and drag the app down to the edge of the display.
Displaying all apps	<ul style="list-style-type: none">▶ Right-click on the Start screen.▶ Click All Apps in the bottom right-hand corner of the display.
Linking apps to the Start screen	<ul style="list-style-type: none">▶ Right-click on the Start screen.▶ Click All Apps in the bottom right hand corner of the display.▶ Right-click on the desired app to highlight it.▶ Click Pin to Start in the bottom left-hand corner of the display.
Linking apps to the taskbar	<ul style="list-style-type: none">▶ Right-click on the Start screen.▶ Click All Apps in the bottom right-hand corner of the display.▶ Right-click on the desired app to highlight it.▶ Click Pin to Taskbar in the bottom left-hand corner of the display.
Installing an app	<ul style="list-style-type: none">▶ Run the Shop app.▶ Search for the desired app and click Install. The app will now be downloaded and installed in the background.

Uninstalling an app	<ul style="list-style-type: none"> ▶ Right-click on the Start screen. ▶ Click All Apps in the bottom right hand corner of the display. ▶ Right-click the desired app. ▶ Click Uninstall at the bottom edge of the display. <p> PLEASE NOTE! <i>Not all apps can be uninstalled. If the Uninstall option is not displayed, this app can not be uninstalled.</i></p>
Running apps as administrator (Only possible with desktop apps)	<ul style="list-style-type: none"> ▶ Right-click the desired app. ▶ Now click Run as administrator on the bottom edge of the display.
Running an app in a new window (Only possible with desktop apps)	<ul style="list-style-type: none"> ▶ Right-click the desired app. ▶ Click Open new window at the bottom edge of the display.
Searching for apps	<ul style="list-style-type: none"> ▶ Move the mouse pointer into the top right-hand corner of the display, move the mouse down and click Search. ▶ Enter the name of the app.
Arranging apps	<ul style="list-style-type: none"> ▶ Click and hold the left mouse button down on the desired app and drag it to the desired position.
Selecting multiple apps	<ul style="list-style-type: none"> ▶ Right-click the desired apps.

19.9. Using the Search Function

Use the search function to find individual tasks, settings or apps quickly.

- ▶ Move the mouse pointer into the top right or bottom corner of the display and click **Search**.
- ▶ Enter the name of the app or file and select an entry from the results list on the left-hand side of the display.

The search results are arranged by **Apps**, **Settings** and **Files**. Choose the category (**Apps**, **Settings** or **Files**) in which the desired file is located.


20. Control Panel

The Control Panel allows you to customise the Start interface.



PLEASE NOTE!

Windows® 8 must be activated for changes to be made.

- ▶ Move the mouse pointer into the top right or bottom corner of the display and click  **Settings**.
- ▶ Next, click **Change PC settings**.

Menu	Instructions
Windows aktivieren	<ul style="list-style-type: none">▶ Activate Windows® 8 by telephone or over the Internet.
Customise	<ul style="list-style-type: none">▶ Set the background image for the lock screen and the Start screen here.▶ Select a profile image here.
User	<ul style="list-style-type: none">▶ Create and update user accounts here. Set or modify the PIN or image code.
Notifications	<ul style="list-style-type: none">▶ Set the various program instructions to On or Off here.
Search	<ul style="list-style-type: none">▶ Define the settings for the search function here.▶ Define the app the search function should work with here.
Sharing	<ul style="list-style-type: none">▶ Define the settings for the share function here.▶ Define the apps to be shared here.
General	<ul style="list-style-type: none">▶ Configure the general settings for time zone, spell checking, language and memory here.▶ Reinstall the operating system without losing personal user data or key basic settings.▶ Restore your Notebook to its factory settings.▶ Perform a reboot with a CD inserted.




Data protection	<ul style="list-style-type: none"> ▶ Configure the security settings for apps, accounts and Windows® 8 here.
Devices	<ul style="list-style-type: none"> ▶ Install additional external connected devices here, e.g. joystick or USB speaker. ▶ Enable or disable Download over metered connections. This function prevents drivers for newly added devices being searched for and downloaded via the Internet.
Wireless	<ul style="list-style-type: none"> ▶ Enable or disable flight mode here. ▶ Enable or disable the integrated WLAN function here.
Simplified operation	<ul style="list-style-type: none"> ▶ Customise the contrast, mouse pointer and tab bar to your requirements here.
Synchronise settings	<ul style="list-style-type: none"> ▶ Configure synchronisation of your Notebook with the connected network. ▶ Configure here whether or not an online synchronisation should also be performed with payable networks.
Home network group	<ul style="list-style-type: none"> ▶ Here you will see the home network group and the apps and files shared within it.
Windows Update	<ul style="list-style-type: none"> ▶ Allow Windows® 8 to search the Internet for any necessary Windows® 8 updates.

20.1. Windows® 8 Power On/Off Functions

The new Windows® 8 allows you to restart your Notebook, put it into **sleep** mode or shut it down.

Changes can be made to the **sleep** settings at any time in the power options.

In **sleep mode** the content of your Notebook's RAM is preserved while practically all other components of your Notebook are disabled or their power consumption reduced to a minimum. For example, if you flip the Notebook shut, it puts it into sleep mode and it is automatically restarted upon opening.

Restarting	<ul style="list-style-type: none">▶ Move the mouse pointer into the top right or bottom corner of the display, move the mouse down and click  Settings.▶ Now click Power and select Restart. Your Notebook will now restart.
Sleep	<ul style="list-style-type: none">▶ Move the mouse pointer into the top right or bottom corner of the display, move the mouse down and click  Settings.▶ Now click Power and select Sleep . Your Notebook will now switch to sleep mode.
Shut down	<ul style="list-style-type: none">▶ Move the mouse pointer into the top right or bottom corner of the display, move the mouse down and click  Settings.▶ Now click Power and select Shut down.

20.2. Control Panel Settings

You can change Windows® 8 settings using the control panel. These settings control virtually everything about how Windows® 8 appears and functions and enable you to customise Windows® 8 to meet your requirements.

When the control panel is run for the first time, some of the most frequently used control panel elements are displayed grouped together by category.

If you require additional information about a control panel element in the category view, you must hold the mouse pointer over the icon or category name and read the text shown there.

To run one of these elements, click on the associated icon or category name.

A list with executable tasks and a selection of individual control panel elements opens for some of these elements.

To launch the control panel, proceed as follows:

- ▶ Move the mouse pointer into the top right or bottom corner of the display and click **Search**.
- ▶ Enter **Control Panel** in the search field.
- ▶ Click on **Control Panel**.

20.3. Resetting the Notebook to its Factory Settings

In the event of problems with the installation or other software problems which make it necessary to reinstall the software, Windows® 8 offers three options for reinstalling Windows® 8 on your Notebook.

First ensure that you have backed up all important data and programs.

20.3.1. Running System Restore

- ▶ After restarting, press the F11 key or start up the Notebook with the **F11 key** held down to launch **PowerRecover**.

or

- ▶ Click the **PowerRecover** Windows® 8 desktop app to run the program from the Windows® 8 desktop.

You will be offered 3 possible options:

- **Burn Drivers and Tools to an Optical disc**
Create a support disc
- **Refresh your PC without affecting your files**
Update your Notebook without deleting your data.
- **Restore**

Choose between two recovery options:

- **Restore to HDD – no backup of user data**
All data on the Notebook will be permanently deleted.
The factory settings will be restored.
- **Restore to HDD – with backed up user data**
The factory settings will be restored and all user data under **C:\USER** will be backed up.



PLEASE NOTE!

Always perform any type of recovery using mains power.



ATTENTION!

The recovery process takes a long time when you select the option to back up user data. Only the data located in the folder C:\USER will be backed up. All other data will be deleted. It is therefore important to perform regular data backups to external data media. We do not accept any liability for claims for compensation arising from the loss of data or any consequential damages incurred.

- ▶ Click **Next** and follow the on screen instructions to restore the factory settings.

20.4. BIOS Setup Program

BIOS setup (the basic hardware configuration of your system) offers you numerous configuration options for operating your Notebook. For example, you can modify the operating mode for interfaces, security features or power supply management. The Notebook has already been configured by the manufacturer to ensure optimum operation.



ATTENTION!

Please only change settings where strictly necessary and if you are familiar with the configuration options.

20.4.1. Running the BIOS Setup

You can only run the configuration program upon system startup. If the Notebook has already started up, switch it off and restart it. Press the **F2** function key to run the BIOS SETUP.

20.5. Kaspersky Internet Security

Kaspersky Internet Security is a comprehensive tool to protect your data. The use of it not only offers you full protection against viruses, but also against spam and attacks against your network. Further components of the software will protect your computer against threats and phishing attacks unknown up to now and allows the access to the Internet to be restricted sensibly. Full protection will cover all areas of data transfers and exchanges.

Kaspersky Internet Security is already installed, so that additional installation will not be necessary. If you nevertheless have to carry out an installation (e.g. after system restoration), you will find the software package on the Application & Support disc supplied with the machine.

Kaspersky Internet Security consists of the following security components:

- **File Anti-Virus**

File Anti-Virus will protect the file system of the computer against infection. The components will be started when the operating system is started. They will be permanently located in the working memory of the computer and will check all the files that are opened, saved or started on your computer and all the connected hard drives. Kaspersky Internet Security will intercept any attack on a file and will check the respective file for known viruses. A file will then only be released for use if it is virus-free or has been successfully disinfected by the program.

- **Mail Anti-Virus**

Mail Anti-Virus will check the incoming and outgoing emails on your computer. An email will only be delivered to the respective recipient if it does not contain any dangerous elements.

- **Web Filter / Child Protection**

The Web Filter will block visits to dangerous web pages and will create a safe working environment during Internet surfing in this way. Child protection allows access to Internet resources and programs to be restricted flexibly for different users of the computer depending on age.



PLEASE NOTE!

Kaspersky Internet Security will be activated automatically if the Internet connection is active. Manual activation will not be necessary. Kaspersky Internet Security will be deactivated automatically after a test period. We recommend the acquisition of a licence in good time, to ensure the optimum protection of your computer, for this reason.

The Kaspersky Internet Security Package will be updated with the most up-to-date virus information for a test period after the free registration. Read the activation information about this on the internet at: <http://www.Kaspersky.com>.



PLEASE NOTE!


The operating system and anti-virus software are automatically updated when the first online connection is made. These processes usually take a few minutes, during which time the operating speed of the computer may be affected although this is only noticeable on initial start-up.

20.6. Windows® 8 – Help and Support

Here you will find a comprehensive collection of instructions, help sections and troubleshooting suggestions.

This help covers the entire spectrum of the Windows® operating system.

It is recommended for both beginners and experts. The information is subdivided into topics and can be printed out or bookmarked. Start as follows:

- ▶ Move the mouse pointer into the top right or bottom corner of the display, move the mouse down and click  **Settings**.
- ▶ Now click on **Help**.
- ▶ Choose the topic you are interested in.

21. FAQ – Frequently Asked Questions

Do I need to install the discs supplied?

- No All programs are preinstalled. The discs are provided as backup copies only.

Where can I find the necessary drivers for my Notebook?

- The drivers can be found in the second hard drive partition in the Drivers and Tools folders.

What is Windows® 8 activation?

- You will find a relevant section in these operating instructions containing detailed information on this topic.

How do I activate Windows® 8?

- Windows® 8 is activated automatically as soon as an Internet connection is established.

How do I activate Windows® 8 without an Internet connection?

- Windows® 8 can also be activated over the telephone. Follow the instructions in the section „Windows Activation“ to activate Windows® 8 by telephone.

When is restoring factory settings recommended?

- This method should only be selected as a last resort. Read about the alternatives in the **System recovery** section.

How do I perform a data backup?

- Perform a backup or backup synchronisation of selected data onto external media to familiarise yourself with the technology. A backup is of no use if you are unable to recover the data or if the medium is faulty or is no longer available.

Why do I need to reinstall my USB device even though I have already done it?

- If the device is not operated on the same USB port as the one it was installed in, it automatically receives a new identifier. The operating system then treats it like a new device and tries to reinstall it.
- Use the installed driver or connect the device to the port on which it was originally installed.

22. Customer Service

22.1. What To Do In Case of Hardware Problems

Malfunctions can sometimes have quite trivial causes, but they may also be the result of defective components. We have included a brief troubleshooting guide below which may help to solve any problems.

If these tips don't do the trick, then we'll be more than pleased to help you out. Just give us a call!

22.2. Find The Cause

Start by carefully checking all the cable connections. If the indicator lamps are not on, ensure that the Notebook and all peripheral devices are connected to the power supply.

- If you are in battery mode, connect the Notebook to the mains adapter and check that the battery is charged.
- If you wish to operate the Notebook using the mains adapter, disconnect the mains adapter from the socket and connect an electrical appliance such as a lamp to the same socket to test it. If the lamp does not work either, seek the advice of an electrician.
- Turn off the Notebook and check all cable connections. If the Notebook is connected to peripheral devices, check all cable connections. Do not swap around the cables for the various devices, even if they look alike. The pin assignment within the cables may be different. Once you have ensured that the device's power supply is functioning and all connections are intact, then switch the Notebook back on.

22.2.1. Faults and Possible Causes

The screen is black.

- This fault can have various causes:
 - The operating light (on/off switch) does not light up and the Notebook is in hibernation.

Solution:

Press the on/off switch.

- The sleep light is flashing. The Notebook is in sleep mode.

Solution:

Press the on/off switch.

- The background lighting has been disabled using the **Fn+F7** keyboard shortcut.

Solution:

Reactivate the background lighting by pressing any key.

The Notebook turns itself off during operation.

- ▶ The battery may be flat. Plug the Notebook in using the mains adapter and charge the battery.

The Notebook cannot be switched on.

- ▶ If you are running the Notebook on batteries, check that they have been inserted correctly and are fully charged.

Wrong time and date displayed.

- ▶ Click the clock display in the taskbar. Select the Datums- und Uhrzeiteinstellung ändern option and enter the correct values.

No data can be read by the optical drive.

- ▶ Check whether the disc has been inserted correctly.

The WLAN/Bluetooth connections do not work.

- ▶ Check that flight mode is disabled.

The touchpad is not working.

- ▶ To activate the touchpad, press the **Fn + F9** keyboard shortcut.

Apps (e.g. the weather app) cannot be displayed as live tiles.

- ▶ Check the date, time zone and time.

22.3. Do You Need More Help?

You've checked through the suggestions in the previous section and you're still having problems with your device? Then call our hotline or contact us at www.medion.de/service. We'll be glad to help you.

Before contacting your technology centre, however, prepare the following information:

- Have you made any upgrades or modifications to the initial configuration?
- What peripheral devices do you use?
- What messages, if any, appear?
- What software were you using when the problem occurred?
- What steps have you already taken to try and rectify the problem?

22.4. Driver Support

The system has been thoroughly and successfully tested with the installed drivers in our test laboratory. It is normal in the computer sector, however, for the drivers to need updating from time to time. This is because there may be compatibility problems with other components (programs, devices) which have not yet been tested.

You can find current drivers on the Internet at the following address:

<http://www.medion.com>

Please use the service address for the country where the device was purchased.

22.5. Transport

Please note the following information if you wish to transport the Notebook:

- Switch the Notebook off. This ensures that the hard drive heads are automatically moved to a safe area to avoid damage. Remove any inserted DVDs/CDs.
- After transporting the Notebook, wait until the appliance has reached room temperature before switching it on. Large changes in temperature or fluctuations in humidity can cause moisture build-up within the Notebook due to condensation. This can cause an electrical short circuit.
- Close the Notebook and check that the lid is firmly closed.
- Always use a Notebook carrying case to protect the Notebook from dirt, moisture, vibrations and scratches.
- Always use the original cardboard packaging to ship your Notebook and obtain advice on this from your carrier.
- Always charge your battery and any spare batteries fully before embarking on longer trips and do not forget to take along your mains adapter.
- Find out about the power and communication options available in your destination before travelling.
- Where necessary, purchase the required power or communication adapter (LAN etc.) before departure.
- When shipping the Notebook, pack the battery separately in the cardboard packaging.
- When going through the hand luggage check at the airport it is recommended that you send the Notebook and all magnetic storage media (external hard drives) through the x-ray facility (the device that scans your bags). Avoid the magnetic sensor (the structure that you walk through) or the magnetic hand scanner (the manual device used by security personnel) as this may destroy your data, among other things.

22.6. Maintenance



ATTENTION!

None of the parts inside the Notebook housing require cleaning or maintenance.

You can increase the lifespan of your Notebook with the following measures:

- Always unplug the device, disconnect all cables and remove the battery before cleaning.
- Clean the Notebook with a damp, lint-free cloth.
- Do not use solvents, corrosive or aerosol-based detergents to clean the device.
- Do not use CD-ROM cleaning discs or similar products that clean the lens of the laser to clean your optical drive.
- Dust or grease on the touchpad can affect its sensitivity. Remove the dust or grease from the surface of the touch pad with a strip of adhesive tape.
- Over time, dust can collect inside the Notebook which then blocks the vents. This can lead to an increase in the fan speed and, therefore, also increase the operating volume of your Notebook. It can also lead to overheating and malfunctions. Therefore, have the interior of the Notebook cleaned by your service department or a specialist at regular intervals.

22.7. Care of the Display

- Close the Notebook when you are not working with it. Avoid scratching the surface of the screen because it can be easily damaged.
- Make sure that no water droplets remain on the screen. Water can cause permanent discolouration.
- Clean the screen with a soft, lint-free cloth.
- Do not place the screen in strong sunlight or near ultraviolet light.
- The Notebook and its packaging can be recycled.



PLEASE NOTE!

The surfaces of the device are covered in protective film to prevent scratching during production and transport.

Remove the film once the device has been set up properly and before you use it.

23. Upgrading/Modifying and Repair

- Upgrades and modifications to your Notebook should **only be carried out by qualified specialists**. If you do not have the necessary qualifications, have the work carried out by a qualified **service technician**. Please contact your customer service department if you have technical problems with your Notebook.
- If a repair must be carried out, please contact only our authorised **service partners**.

23.1. Notes for Service Technicians

- Only service technicians may open up the Notebook housing or upgrade or modify your Notebook.
- Use only original replacement parts.
- Before opening the housing, disconnect all power and connecting cables and remove the battery. If the Notebook is not disconnected from the power supply before being opened, there is a risk that components could be damaged.
- Internal components of the Notebook may be damaged by electrostatic discharge (ESD). Carry out repairs, as well as system enhancements or modifications, at an ESD workplace. If such a workplace is not available, wear an antistatic cuff or ensure you are touching an earthed, metallic object. We will charge for any repairs to damage caused by incorrect handling.

23.2. Information on Laser Radiation

- The Notebook can contain laser equipment classified as laser class 1 to laser class 3b. The equipment meets the requirements for laser class 1.
- By opening the housing of the optical drive, you will have access to laser equipment classified up to laser class 3b.

The following should be observed when removing and/or opening this laser equipment:

- The integrated optical drive contains no parts that require repair or maintenance.
- Repairs to the optical drive should only be carried out by the manufacturer.
- Do not look directly into the laser beam, even when using optical instruments.
- Do not expose the laser beam. Avoid exposing your eyes or skin to the laser beam – either directly or through scattered laser radiation.

24. Recycling and Disposal

Should you have any questions concerning the disposal please contact your dealer or customer service.



Packaging

Your device has been packaged to protect it against transportation damage. Packaging is raw material and can be re-used or added to the recycling system.



Device

At the end of its life, the device should not be disposed of in household rubbish. Enquire about the options for environmentally friendly and appropriate disposal.



Batteries

Do not dispose of used or defective batteries in the household rubbish! They should be taken to a collection point for used batteries.

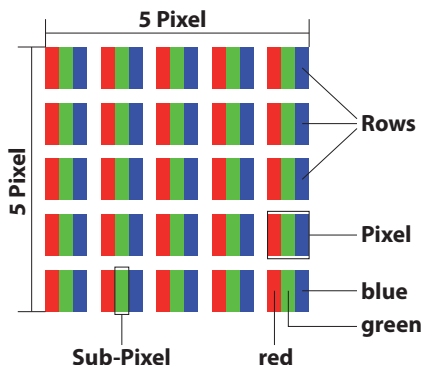
25. European EN 9241-307 Class II Standard

For active matrix LCDs (TFT) with a resolution of **1600 x 900 pixels**, each of which consist of three sub-pixels (red, green, blue), there are a total of approx. **4.3** million control transistors in use. Due to this very high number of transistors and the associated extremely complex manufacturing processes used, occasionally one or more pixels can fail or become incorrectly controlled.

In the past, there were a number of approaches for defining the permitted number of pixel defects. However, these approaches were mostly very complicated and varied from one manufacturer to the next. When handling warranty issues for all of its display products, MEDION therefore adheres to the strict and transparent requirements of the standard **ISO 9241-307, Class II**; which has been briefly summarised below.

The **EN 9241-307** standard defines, amongst other things, the generally applicable guidelines relating to pixel defects. Pixel defects are categorised into four fault classes and three defect types. Every individual pixel consists of three sub-pixels, each of which is assigned a basic colour (red, green, blue).

Pixel structure



Pixel defect types:

- Type 1:
permanently illuminated pixel (bright, white dot) even when not activated. A white pixel occurs due to the illumination of all three sub-pixels.
- Type 2:
non-illuminated pixel (dark, black dot) even when activated.
- Type 3:
abnormal or faulty red, green or blue sub-pixel (e.g. permanently illuminated at half brightness, one colour not illuminated, flashing or flickering but not type 1 or 2)

Supplement: Type 3 cluster (= failure of two or more sub-pixels within a 5 x 5 pixel block). A cluster is a field of 5 x 5 pixels (15 x 5 sub-pixels).

EN 9241-307, error class II

Resolution	Type 1	Type 2	Type 3	Cluster Type 1, type 2	Cluster Type 3
1024 x 768	2	2	4	0	2
1280 x 800	3	3	6	0	3
1280 x 854	3	3	6	0	3
1280 x 1024	3	3	7	0	3
1366 x 768	3	3	7	0	3
1400 x 1050	3	3	8	0	3

25.1. FCC Compliance Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced technician for help.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Shielded interface cables, if any, must be used in order to comply with the emission limits